

REMARKS/ARGUMENTS

Claims 1, 3 and 5-10 are pending. By this Amendment, claims 2 and 4 are cancelled and claims 1, 3 and 5-10 are amended. Support for the amendments to claims 1, 3 and 5-10 can be found, for example, in the present specification at page 3, lines 1 to 24, and in original claims 1-3 and 5-10. No new matter is added. In view of the foregoing amendments and following remarks, reconsideration and allowance are respectfully requested.

Rejection Under 35 U.S.C. §102

A. Heibel

The Office Action rejects claims 1-10 under 35 U.S.C. §102(b) over DE 19840586 to Heibel et al. ("Heibel")*. By this Amendment, claims 2 and 4 are cancelled, rendering the rejection moot as to those claims. As to the remaining claims, Applicants respectfully traverse the rejection.

Claim 1 recites "[a] method for reducing an amount of residual monomer in an aqueous polymer dispersion, comprising: treating the aqueous polymer dispersion with an initiator system; wherein: the initiator system comprises ... an inorganic salt of persulfuric acid ... a methyl ketone ... of the formula R1-C(=O)-CH₃ ... " (emphasis added). Heibel does not disclose or suggest such a method.

The Office Action correctly points out that Heibel discloses a method for removing residual monomers from an aqueous polymer dispersion using an initiator system including an oxidizing agent and a reducing agent. *See* Heibel, column 1, line 59 to column 2, line 27. While Heibel appears to identify methyl ketone compounds as possible reducing agents, the methyl ketone compounds in Heibel are hydroxy functionalized. *See* Heibel, column 2, line 51 to column 3, line 15. The methyl ketone compounds of claim 1, by contrast, do not

* Discussion of Heibel is made with reference to its U.S. counterpart, U.S. Patent No. 6,365,709.

include hydroxy functionalized methyl ketone compounds. *See* claim 1, definition of R1. Moreover, there is nothing in Heibel that remotely suggests that the methyl ketone compounds of claim 1, which differ from the hydroxy functionalized ketones required in the method of Heibel, could or should be used in place of such hydroxy functionalized ketones.

As Heibel fails to disclose or suggest method for reducing an amount of residual monomer in an aqueous polymer dispersion employing an initiator system including a methyl ketone of the formula $R1-C(=O)-CH_3$, Heibel fails to disclose or suggest each and every feature of claim 1.

As explained, claim 1 is not anticipated by Heibel. Claims 3 and 5-10 depend from claim 10 and, thus, also are not anticipated by Heibel. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

B. Gotsche

The Office Action rejects claims 1-10 under 35 U.S.C. §102(b) over U.S. Patent No. 6,444,785 to Gotsche et al. ("Gotsche"). By this Amendment, claims 2 and 4 are cancelled, rendering the rejection moot as to those claims. As to the remaining claims, Applicants respectfully traverse the rejection.

Claim 1 is set forth above. Gotsche does not disclose or suggest such a method.

The Office Action correctly points out that Gotsche discloses a method for removing residual monomers from a polymer composition using a redox initiator system. *See* Gotsche, column 2, lines 14 to 19. However, in the method of Gotsche, W/O emulsions of crosslinked water-swollen polymers are subjected to aftertreatment. In claim 1, by contrast, aqueous polymer dispersions are subjected to aftertreatment. Gotsche does not disclose or suggest aftertreating aqueous polymer dispersions, and further does not disclose or suggest that the described methods would have applicability to aqueous polymer dispersions.

In addition, while Gotsche appears to identify methyl ketone compounds as possible reducing agents, the methyl ketone compounds in Gotsche are hydroxy functionalized. See Gotsche, column 3, lines 19 to 48. As discussed above with respect to Heibel, the methyl ketone compounds of claim 1, by contrast, do not include hydroxy functionalized methyl ketone compounds. See claim 1, definition of R1. There is nothing in Gotsche that remotely suggests that the methyl ketone compounds of claim 1, which differ from hydroxy functionalized ketones, could or should be used in place of such hydroxy functionalized ketones.

As Gotsche fails to disclose or suggest method for reducing an amount of residual monomer in an aqueous polymer dispersion employing an initiator system including a methyl ketone of the formula $R1-C(=O)-CH_3$, Gotsche fails to disclose or suggest each and every feature of claim 1.

As explained, claim 1 is not anticipated by Gotsche. Claims 3 and 5-10 depend from claim 10 and, thus, also are not anticipated by Gotsche. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

C. Heider

The Office Action rejects claims 1-10 under 35 U.S.C. §102(b) over DE 3834734 to Heider et al. ("Heider")[#]. By this Amendment, claims 2 and 4 are cancelled, rendering the rejection moot as to those claims. As to the remaining claims, Applicants respectfully traverse the rejection.

Claim 1 is set forth above. Heider does not disclose or suggest such a method.

Heider is directed to a free radical initiator system for polymerizing olefinically unsaturated monomers. See Heider, column 1, lines 5 to 10. The system requires the

[#] Discussion of Heider is made with reference to its U.S. counterpart, U.S. Patent No. 5,087,676.

combination of a redox initiator system including an iron salt and a redox initiator system including a vanadium salt. *See Heider*, column 1, lines 60 to 68. *Heider* does not disclose or suggest an initiator system including the particular combination of an inorganic salt of persulfuric acid and a methyl ketone, as recited in claim 1.

The initiator system of *Heider* requires salts of iron and vanadium. While the initiator system of *Heider* includes reducing agents and oxidizing agents, *Heider* does not indicate that the particular combination of agents recited in claim 1 should be used, and does not disclose employing such agents in the absence of iron and vanadium salts. One of ordinary skill in the art would not have expected that *Heider's* teachings of reducing agents and oxidizing agents complementary to iron and vanadium salts would have any particular applicability to methods, such as the method of claim 1, in which neither iron salts nor vanadium salts are required. Also, Applicants note that *Heider* is generally directed to an initiator system for preparing a polymer, not an aftertreatment for reducing monomer content in an aqueous polymer dispersion. While, *Heider* makes brief reference to the possibility that the initiator system could be used for aftertreatment (*see Heider*, column 5, lines 14 to 22), *Heider* provides no specific guidance regarding the composition of an initiator used in such an aftertreatment, much less that the initiator should include the particular components recited in claim 1.

As *Heider* fails to disclose or suggest method for reducing an amount of residual monomer in an aqueous polymer dispersion employing an initiator system including an inorganic salt of persulfuric acid and a methyl ketone, *Heider* fails to disclose or suggest each and every feature of claim 1.

As explained, claim 1 is not anticipated by *Heider*. Claims 3 and 5-10 depend from claim 10 and, thus, also are not anticipated by *Heider*. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

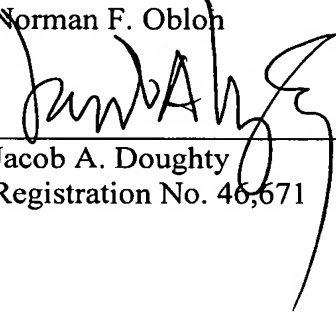
Conclusion

For the foregoing reasons, Applicants submit that claims 1, 3 and 5-10 are in condition for allowance. Prompt reconsideration and allowance are respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Norman F. Oblon



Jacob A. Doughty
Registration No. 46,671

Customer Number

22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 06/04)